

A Petition for Extension of Time, to extend the response period for the Office Action, dated October 10, 2002 for one additional month to February 10, 2003, is being filed concurrently.

REMARKS

Status Of Application

Claims 1-33 are pending in the application; the status of the claims is as follows:

Claims 1-32 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,246,804 B1 to Sato et al. (hereinafter the “Sato Patent”).

Claim 33 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

The objection to claim 33 as being dependent upon a rejected base claim, but allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, is noted with appreciation.

35 U.S.C. § 102(e) Rejection

The rejection of claims 1-32 under 35 U.S.C. § 102(e) as being anticipated by the Sato Patent, is respectfully traversed based on the following.

The Sato patent is directed to an image retrieval apparatus and method which processes a single target image to provide search criteria for searching an image database 109 (column 6, lines 4-7). **A single image is selected as the designate image 100.**

Referring to FIG. 2, reference numeral 100 denotes **an** image (to be referred to as a designated image hereinafter) for designating **an** image as a search target from the image files 109. **The** designated image 100 is stored in the designated image memory 101. A single region processing unit 102 refers to the description files 110 which describes the contents of each image data in the image files 109 using the feature of the image data to discriminate if each region included in the image data is included in **the** designated image 100. If the region is included in **the** image 100, the unit 102 adds the description information of the region of the image data and information of a movable region of **the** designated image 100 to the single region memory 103. Reference numeral 104 denotes a compound region processing unit for discriminating if a condition that **the** designated image 100 simultaneously contains all regions of image data constituting a compound region is satisfied. If **the** image 100 simultaneously contains all the regions, the unit 104 adds the description information of the regions and information of a movable region of **the** designated image 100 to the compound region memory 105. (column 6, lines 4-24, emphasis added)

Thus, it is clear that the search process of the Sato patent uses a **single key image** for comparison against the image files 109. Individual regions of the image files 109 are compared to corresponding regions in the designated image 100 using the description files 110 for each image (column 6, lines 39-50). When a relative match is detected, the region information is added to a compound region memory 106, which provides a compound region for further comparison to the data from the description files.

In contrast to the cited prior art, Claim 1 includes:

an image database storing a plurality of database images, each of said plurality of database images having a plurality of features;
a specifying controller for specifying **a plurality of key images**, each of said plurality of key images being specified by a user and having a respective plurality of features;
an extracting controller for extracting common key image feature values for **common key image features that are common to the plurality of key images**;
a calculating controller for **comparing the common key image feature values, extracted by the extracting controller, with the respective feature values of the plurality of database images** to thereby sequentially calculate similarities between each of the common key image feature values and respective ones of the database image feature values for each of the plurality of database images; and

a searching controller for retrieving from the database at least one of the plurality of database images which is similar to the plurality of key images, based on a similarity calculated by the calculating controller.

Claim 1 includes the limitation that the searching system includes a specifying controller for specification of a plurality of key images to determine search criteria. The cited reference only designates a single image (the designated image 100) for the extraction of search criteria. Thus, the cited prior art does not show or suggest "a specifying controller for specifying **a plurality of key images.**"

In addition, claim 1 includes the limitation that the extracting controller extracts common key image features from the plurality of key images. The invention of claim 1 provides greater image search accuracy by determining which image features are common in a selected set of key images (written description, page 31, line 16, to page 32, line 6). Because the Sato patent uses a single designated image to derive search criteria, it cannot show or suggest determining common features between a plurality of images to provide search criteria. The term "common key image features" is nonsensical when there is only one designated image. In the cited prior art, the designated image has no other image with which to have anything in common. Thus, the cited prior art does not show or suggest "an extracting controller for extracting common key image feature values for **common key image features that are common to the plurality of key images.**"

A claim is anticipated only if every limitation of the claim is shown or suggested in the cited reference.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). (MPEP § 2131)

Because the cited reference does not show or suggest the quoted limitations, claim 1 is not anticipated by the cited prior art. Claims 2 and 3 are dependent upon

claim 1 and thus include every limitation of claim 1. Therefore, claims 1-3 are not anticipated by the cited prior art.

Also, in contrast to the cited prior art, claim 4 includes:

a specifying controller for specifying a plurality of key images used to specify search conditions, each of said plurality of key images being specified by a user and having a plurality of key image features, each of said plurality of key images having a common feature value for each of said plurality of key image features;

a calculating controller for comparing the plurality of key images, specified by the specifying controller, with the plurality of database images to thereby calculate similarities between the common feature value for each of the plurality of key image features and a corresponding one of the plurality of database image features for each of the plurality of database images;

As noted above, the cited prior art does not show or suggest an apparatus that selects a plurality of key images and determines the common features of the key images in order to provide image search criteria. Therefore, claim 4 is not anticipated by the cited prior art. Claims 5 and 6 are dependent upon claim 4 and thus include every limitation of claim 4. Therefore, claims 4-6 are not anticipated by the cited prior art.

Also in contrast to the cited prior art, claim 7 includes:

a specifying controller for specifying a plurality of key images specified by a user for specifying search conditions;

a first calculating controller for comparing a feature value calculated for each common feature of the plurality of key images to thereby calculate a first degree of similarity for each of said plurality of database images;

As noted above, the cited prior art does not show or suggest an apparatus that selects a plurality of key images and determines the common features of the key images in order to provide image search criteria. Therefore, claim 7 is not anticipated by the cited prior art. Claims 8-10 are dependent upon claim 7 and thus include every limitation of claim 7. Therefore, claims 7-10 are not anticipated by the cited prior art.

Also in contrast to the cited prior art, claim 11 includes:

specifying a plurality of key images specified by a user for specifying search conditions;

extracting common feature values from the plurality of key images; comparing the common feature values with the feature values of the plurality of database images to thereby sequentially calculate similarities between the common feature values and the database image feature values;

The cited prior art does not show or suggest a method including specifying a plurality of key images, determining common feature values of those key images and comparing those common feature values to an image database. The cited prior art designates a single image and then compares regions of that image to regions of the database images. Determining the common features of a single image is a non sequitur. There is no suggestion of determining any common features between the regions in the cited prior art. Therefore, the cited prior art does not show or suggest every element of claim 11. Claims 12 and 13 are dependent upon claim 11 and thus include every limitation of claim 11. Therefore, claims are not anticipated by the cited prior art.

Also in contrast to the cited prior art, claim 14 includes:

specifying a plurality of key images specified by a user for specifying search conditions, said plurality of key images having common features, said common features of said plurality of key images each having a key image feature value;

comparing the key image feature values of the plurality of key images with the plurality of database feature values of the plurality of database images to thereby calculate similarities between the key image feature values and the plurality of database image feature values;

As noted above, the cited prior art does not show or suggest selecting a plurality of key images and determining the common features of the key images in order to provide image search criteria. Therefore, claim 14 is not anticipated by the cited prior art. Claims 15 and 16 are dependent upon claim 14 and thus include every limitation of claim 14. Therefore, claims 14-16 are patentably distinct from the cited prior art.

Claim 17 is directed to an image searching method which comprises the steps of:

specifying a plurality of key images specified by a user for specifying search conditions, said plurality of key images each having a plurality of common feature values, each of said common feature values corresponding to one of the features of the plurality of key images;

comparing the common feature values of the plurality of key images with respective feature values of the plurality of database images to thereby calculate first similarities therebetween;

As noted above, the cited prior art does not show or suggest selecting a plurality of key images and determining the common features values of the key images in order to provide image search criteria. Therefore, claim 17 is not anticipated by the cited prior art. Claims 18-20 are dependent upon claim 17 and thus include every limitation of claim 17. Therefore, claims 17-20 are patentably distinct from the cited prior art.

Also in contrast to the cited prior art, claim 21 includes

instructions for specifying a plurality of key images specified by a user for specifying search conditions;

instructions for extracting common feature values of features of the plurality of key images;

instructions for comparing the common feature values with feature values of the plurality of database images to thereby sequentially calculate similarities between the common feature values of the plurality of key images and the database image feature values;

The cited prior art does not show or suggest a software program including instructions for specifying a plurality of key images, extracting common feature values and comparing the extracted common feature values to the database images. Therefore, claim 21 is patentably distinct from the cited prior art. Claims 22 and 23 are dependent upon claim 21 and thus include every limitation of claim 21. Therefore, claims 21-23 are not anticipated by the cited prior art.

Also in contrast to the cited prior art, claim 24 includes:

instructions for specifying a plurality of key images specified by a user having common feature values used to specify search conditions;

instructions for comparing the plurality of key images with the plurality of database images to thereby calculate similarities between common feature values of the plurality of key images and the database image feature values;

The cited prior art does not show or suggest a software program including instructions for specifying a plurality of key images having common feature values and comparing the extracted common feature values to the database images. Therefore, claim 24 is patentably distinct from the cited prior art. Claims 25 and 26 are dependent upon claim 24 and thus include every limitation of claim 24. Therefore, claims 24-26 are not anticipated by the cited prior art.

Also in contrast to the cited prior art, claim 27 includes:

instructions for specifying a plurality of key images specified by a user for specifying search conditions, said plurality of key images each having a plurality of features;

instructions for calculating feature values for each of the plurality of key images from the plurality of features for each of the plurality of key images;

instructions for comparing the feature values of each of the plurality of key images with respective feature values of the plurality of database images to thereby calculate first similarities between the feature values of the plurality of key images and the feature values of the plurality of database images;

The cited prior art does not show or suggest a software program including instructions for specifying a plurality of key images, extracting common feature values and comparing the extracted common feature values to the database images. Therefore, claim 27 is patentably distinct from the cited prior art. Claims 28-30 are dependent upon claim 27 and thus include every limitation of claim 27. Therefore, claims 28-30 are not anticipated by the cited prior art.

Accordingly, it is respectfully requested that the rejection of claims 1-14, 17-24, and 27-30 under 35 U.S.C. § 102(e) as being anticipated by the Sato patent, be reconsidered and withdrawn.

Also in contrast to the cited prior art, claim 31 includes the limitations of:

specifying a plurality of key images specified by a user for specifying search conditions, said plurality of key images each having a plurality of key image features each corresponding to at least one of a plurality of database features, said plurality of key images having a plurality of common features which are common to all of the plurality of key images;

calculating common key image feature values from the common features for each of the plurality of key images;

comparing the common feature values of the common features with corresponding database image features of the plurality of database images to calculate similarities therebetween;

The cited prior art does not show or suggest specifying a plurality of key images, calculating the common features of the key images and comparing the common features to the database image features. The cited prior art designates a single image and then compares regions of that image to regions of the database images. Therefore, claim 31 is patentably distinct from the cited prior art.

Also in contrast to the cited prior art, claim 32 provides a computer program product including the steps of:

specifying a plurality of key images specified by a user for specifying search conditions;

calculating common feature values of the plurality of key images by comparing the plurality of key image features for each of the key images to determine feature values which are common to all of the plurality of key images;

comparing common feature values of the plurality of key images with the database image feature values of the plurality of database images to calculate similarities therebetween;

The cited prior art does not show or suggest specifying a plurality of key images, calculating the common features of the key images and comparing the common features to the database image features. The cited prior art designates a single image and then compares regions of that image to regions of the database images. Therefore, claim 32 is patentably distinct from the cited prior art.

Accordingly, it is respectfully requested that the rejection of claims 1-32 under 35 U.S.C. § 102(e) as being anticipated by the Sato Patent, be reconsidered and withdrawn.

CONCLUSION

Wherefore, in view of the foregoing remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Response does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is currently due. However, if a fee, other than the issue fee, is due, please charge this fee to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260.

Any fee required by this document other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee,

and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

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